Enlargement to the East

In 1998 the EU began formal negotiations with five of the Central and East European (CEE) countries for eventual accession to the EU. The five countries are Poland, Hungary, the Czech Republic, Estonia, and Slovenia. Officially the target date for accession is 2002, but many believe the CEE countries will not be ready until 2006 at the earliest. Analysis reported in this article suggests that enlargement may bring pressures to the EU-18 in the form of additional surpluses of beef, pork, and rye. However, the article points out several factors that could reduce those pressures. One is that accession may be delayed, since the CEE countries still must make several important institutional changes. Other important factors are quality differentials between CEE and EU products and the changes that accession may bring to CEE land, labor, and capital markets. [Nancy Cochrane (cochrane@econ.ag.gov)]

Formal negotiations began in March 1998 between the EU and the five Central and East European (CEE) countries identified as the first tier for eventual membership (Poland, Hungary, Estonia, Slovenia, and the Czech Republic). Official statements by both sides identify 2002 as the target date for accession. Recent, unofficial statements suggest that enlargement will most likely not occur before 2006. It is a near certainty that enlargement to include at least some of the CEE countries will eventually take place. It is far less certain just how much pressure enlargement will place on the CAP. Enlargement will have implications for the EU budget, but the severity of such pressures depends on the timetable for accession and the extent of restructuring that the CEE countries manage to achieve before accession.

One source of potential pressures on the CAP from enlargement is the possibility of large surpluses of livestock products. Agriculture's share of total GDP is considerably larger in most of the CEE countries than in the EU. The share is about 6 percent in Poland and 13 percent in Hungary and the Czech Republic. The shares are much smaller in Slovenia and Estonia. The CEE countries together are surplus producers of grain and livestock products, and most of them produce these surpluses at prices well below those of the EU. The enlargement analysis presented later in this chapter suggests that wheat and barley surpluses will not be a serious problem for the enlarged EU, but surpluses of livestock products and "other coarse grains" (mainly rye) could grow significantly under Agenda 2000. Increased surpluses of beef and pork could make it more difficult for the enlarged EU to meet its WTO commitments regarding export subsidies. See next section for further discussion of WTO implications of enlargement.

Enlargement to the east will exert other types of budgetary pressures on the EU. All five countries on the fast track for accession will be eligible for infrastructure assistance from the EU's Structural Funds. Agenda 2000 already envisions substantial outlays for pre-accession aid and infrastructure

development in the CEE countries. But more assistance may be needed than is now envisioned. Moreover, demands for compensation payments will place an even greater strain on the EU budget. The EU currently has no regulations stipulating a minimum size for an operation to qualify as a farm. Poland has 2 million farms, many with no more than 2 hectares. Hungary also has about 1 million small, mainly subsistence farmers. All these producers, if still farming at the time of accession, will be eligible for compensation payments. Most will also qualify as "small producers" and be exempt from set-aside requirements.

Other factors, however, could mitigate these pressures. One is simply that the CEE countries are highly unlikely to be ready for accession by the target date of 2002. There are important institutional reforms that the countries must still undertake before they are eligible. Most analysts believe that the CEE countries will not be able to meet all the requirements for accession until 2006 at the earliest.

Another factor is that the surpluses that develop under Agenda 2000 may not be as large as projected by the ERS European Simulation Model (ESIM). For one thing, the price differentials between CEE and EU products result partly from quality differences, particularly for livestock products. Another consideration is that accession will likely lead to important shifts in the primary factor (land, labor, and capital) markets in the CEE countries. EU membership will attract more foreign investment, and the structural funds will generate more investment. These capital inflows could put upward pressure on wages and land prices, while making capital more readily available. These fundamental shifts could alter the eventual structure of CEE output.

The following discussion will focus primarily on Poland and Hungary because they have the largest agricultural sectors of the five applicant countries and have the potential to generate large surpluses in the enlarged EU.

A Realistic Timetable?

Before any country can be accepted for membership, it must meet the following criteria:

- ** develop stable institutions to guarantee democracy, rules of law, and respect for human rights;
- ** develop an efficient market economy capable of competing on the integrated market;
- ** demonstrate the ability to meet obligations of EU membership, including implementation of political, economic, and monetary goals.

Nearly all the CEE countries applying for membership meet the first criterion. They have made substantial progress towards developing a market economy, but there are concerns about efficiency, particularly in Poland. All five countries have considerable work to do before they meet the institutional, economic, and monetary requirements. EU Commission documents point out a number of institutional shortcomings in all the countries.

The current EU position is that the CEE countries would have to immediately adopt all EU legislation upon accession, which includes 20,000 laws comprising 80,000 pages applying to agriculture and food production alone. There are working groups in the agricultural ministries of all the CEE countries reviewing these 80,000 pages and rewriting their own legislation to conform to the EU laws. All the countries have made considerable progress towards harmonization of the laws. However, building the institutions needed to implement these laws and regulations is a much greater challenge.

Hungary is considered more ready for accession than Poland. In fact, the Hungarians have expressed fears that their accession may be held up by Poland's lack of progress. But the EU Commission points out some areas that Hungary still needs to address. Areas of concern for both Hungary and Poland include lagging rural development initiatives; compliance with EU sanitary, phytosanitary, and animal welfare regulations; land and credit markets; statistical reporting; and the ability to implement market support policies similar to the EU.

Rural development policies. There are large economic disparities among regions in both Poland and Hungary, and both countries still need to do more to improve infrastructure and to generate non-agricultural employment. The EU is already providing substantial pre-accession funds to address these shortcomings, and even more funds would come after accession through the Structural Funds. But the EU complains that there is a lack of coordination in developing and implementing rural policies; neither Poland nor Hungary has the administrative capacity at the regional level to administer the development funds.

Implementation of sanitary, phytosanitary, and animal welfare regulations. Poland and Hungary have made considerable progress in harmonizing their standards and regulations with those of the EU. However, they lack the administrative structures to enforce them. Poland's Ministry of Agriculture, for example, has no staff carrying out inspections at meat plants, leaving inspections to be done by plant personnel. An even more serious concern to the EU is inadequate enforcement of sanitary and phytosanitary standards at border crossings with third countries. Checks at borders are limited to controls on certificates and other documents. Actual physical inspections are done at the destination. These procedures do not comply with EU import rules with third countries.

Larger livestock producers are becoming more aware of the eventual need to comply with EU regulations on animal welfare, and some are making efforts to bring their operations up to EU standards in this area. But animal welfare legislation harmonized with that of the EU has not yet been enacted in any of the CEE's.

Alignment of market support policies with those of the EU. The EU Commission has pointed out that the support schemes for pork in Hungary and Poland still need to be harmonized to EU standards. The CEE's also need to introduce market instruments such as dairy quotas and set-aside requirements. Of greater concern than the policies themselves, is the need to set up the administrative structures to administer CAP policies. Poles are of the opinion that the EU would find it administratively impossible to administer the accompanying production quotas and output registration for 2 million farms. (*Rzeczpospolita Oct. 9, 1998*)

The entire market infrastructure of the CEE countries is also a concern by the EU. Current CEE market intervention agencies, particularly the Polish Agency for Agricultural Markets (AMA), have powers that go well beyond the rather passive role of the EU intervention agencies. Marketing cooperatives, which are well developed in the EU for fruits, vegetables, sugar, dairy, and grain are rare in the CEE countries. Wholesale markets are also underdeveloped.

The EU is also concerned about the governance of the restructured production cooperatives that dominate the agricultural landscape in Hungary and the Czech Republic. These entities have been privatized and are owned and managed by their members. But there are reports of conflicts between owner-members and workers. Managers often act independently without seeking guidance from representatives of the members. In addition, there are still very close ties between cooperative management and local politicians. As a result, managers are often pressured to keep on surplus employees and are not entirely free to seek profit maximization.

Better functioning land markets. Most land is privately owned in Poland, most owners have clear title to their land, and in principle, Polish citizens are free to buy and sell land.

However, land markets remain undeveloped. According to a World Bank assessment (Debatisse, 1997), Poland needs an efficient system of contracts to transfer ownership, clear regulations for using land as collateral, low-cost procedures for resolving disputes, and an easily accessible information system of land transactions, prices, and ownership.

Hungary has even more serious impediments to a fully functioning land market. Although most of Hungary's land went into private ownership in the early 1990s, many land owners remain without clear title. Moreover, only individuals are allowed to own land. Because corporate land ownership is prohibited, corporations cannot use land as collateral.

Both Poland and Hungary prohibit foreign ownership of land. EU negotiators insist that this will have to change on accession; Polish and Hungarian officials believe they can continue to restrict ownership to their own citizens.

Improvements in statistical reporting. The EU is also concerned about Polish statistics, pointing to Poland's need to restore its farm registers and provide better data on purchasing and distribution. Poland may not be able to get Structural Funds if it fails to prepare sound regional statistics. The EU also insists that Hungary strengthen its regional statistics regarding unemployment and poverty, as well as market price quotation systems.

The EU PHARE Program is providing significant assistance to help the CEE countries overcome these institutional shortcomings. But even with PHARE funding and technical assistance, it will take time to implement changes in all these areas. Most officials agree informally that the CEE countries will not be ready for accession until at least 2006. The official statement is still that there will be no transition period, but several CEE politicians have stated that they will need some sort of transition period before they can implement all EU legislation.

Competitiveness of CEE Agriculture and Food in an Enlarged EU

Of the five CEE countries slated for earliest accession, only Hungary is a net exporter of agricultural products to the EU (table 4). All five are net exporters of live animals to the EU (mostly cattle), while Hungary and Poland are net exporters of meat and meat products, dairy products, and fruits and vegetables as well. Hungary is a net exporter of grain to the EU, whereas the other four import grain from the EU. All are net importers of feeds and processed foods. These trade patterns suggest that the CEE countries have a comparative advantage in live animals, livestock products, fruits, vegetables, and dairy products with respect to the EU-15. For the most part these are labor intensive lines of production, and the countries are able to maintain this comparative advan-

tage because of their lower wage rates. However, true comparative advantage is obscured to an extent by extensive support measures in place in the CEE countries, which provide heavy subsidies to livestock producers in Hungary and grain producers in Poland and the Czech Republic.

Using the ESIM model, we analyzed the impact of Agenda 2000 plus enlargement on production and trade of grains, oilseeds, and livestock of the CEE countries and the enlarged EU. The countries included in the analysis were Poland, Hungary, and the Czech Republic. We also obtained results for the EU-15 and the enlarged EU-18. The key assumptions underlying the analysis were:

- ** the CEE countries will immediately adopt the EU's Common Agricultural Policy (CAP) in 2002, with no transition period. Thus in that year CEE prices will adjust to the prices laid out in Agenda 2000.
- ** CEE producers will receive the same compensation payments and will be subject to the same set-aside requirements as their counterparts in the EU-15.
- ** CEE producers will be subject to the EU dairy quota, which was fixed at USDA's projected milk production for each of the CEE countries in 2001. The dairy quota also constrains CEE beef production, as more than half of the beef produced is a product of the dairy herd.

This analysis compares three scenarios for the CEE countries: the 1998 USDA baseline, Agenda 2000 without enlargement, and enlargement under Agenda 2000. The base scenario for the EU-15 was Agenda 2000 without enlargement, which was described in detail in the previous section. The ensuing discussion of the results will focus mainly on the EU-18 under Agenda 2000 compared with the EU-15 without enlargement under Agenda 2000.

To understand the results, it is helpful to compare the current producer prices in the CEE countries and the EU-15. When previous ERS analysis was done (Leetmaa, Jones, and Seeley), CEE prices for nearly all commodities were substantially below the prevailing EU prices. Thus the scenarios run in that analysis assumed sharp increases in nearly all prices on accession. In the years since that analysis, there has been some convergence of CEE and EU prices. In fact wheat prices in Poland and the Czech Republic, thanks to their domestic intervention schemes, are currently higher than the Agenda 2000 wheat price (table 5). CEE prices of barley, corn and "other coarse grains," however, are lower. Prices of all CEE livestock products are below those of the EU. Pork prices in the CEE countries are not as far below the EU prices as they were a few years ago. Significant price gaps remain for beef and poultry.

Table 4--Agricultural trade between the EU and the five CEE countries preparing for accession

				2					ì			
	1992	1993	1994	1995	1996	1997	1992	1993	1994	1995	1996	1997
						Million U.S. dollars	S. dollars					
Czech Republic												
Live animals	n.a.	7,455	16,375	31,752	17,822	6,760	n.a.	41,768	45,455	44,334	22,076	27,316
Meat and meat preparations	n.a.	10,772	36,348	34,485	29,875	21,851	n.a.	30,162	22,688	24,406	24,843	22,094
Dairy products and eggs	n.a.	25,891	27,643	45,252	56,743	33,793	n.a.	118,225	107,106	136,265	93,432	45,294
Grains and grain preparations	n.a.	43,669	26,760	35,353	91,869	92,482	n.a.	11,562	15,441	60,369	17,336	10,709
Coffee, tea, and spices	n.a.	38,131	55,839	76,139	79,528	64,108	n.a.	5,716	5,815	9,773	7,910	8,183
Vegetables and fruit	n.a.	131,094	198,393	270,913	282,046	229,916	n.a.	77,374	85,413	83,312	71,048	58,633
Sugar, sugar products and honey	n.a.	10,615	13,270	36,956	40,394	25,904	n.a.	4,316	7,703	28,835	10,286	15,838
Animal feeds	n.a.	44,343	57,142	91,169	118,870	115,724	n.a.	31,154	31,996	33,736	36,950	31,352
Tobacco and products	n.a.	21,616	48,956	40,329	34,311	21,087	n.a.	1,246	5,880	3,648	17,672	50,154
Oilseeds	n.a.	3,397	4,260	8,428	4,587	4,313	n.a.	9,136	13,147	18,177	33,503	30,962
Veg. fats and oils	n.a.	25,013	31,143	41,767	37,874	30,009	n.a.	3,884	4,764	4,016	485	221
Total agricultural products to EU	n.a.	495,153	676,940	980,458	1,081,388	902,324	n.a.	435,781	489,760	564,849	436,884	367,171
Total agricultural exports	n.a.	1,065,686	1,375,705	1,914,384	2,132,376	1,935,330	n.a.	1,033,870	1,009,242	1,288,441	1,129,315	1,036,798
Estonia												
Meat and meat preparations	n.a.	n.a.	n.a.	7,817	10,542	14,205	n.a.	n.a.	n.a.	1,620	321	224
Dairy products and eggs	n.a.	n.a.	n.a.	20,908	19,878	39,698	n.a.	n.a.	n.a.	45,922	29,517	35,562
Grains and grain preparations	n.a.	n.a.	n.a.	19,837	43,367	32,380	n.a.	n.a.	n.a.	209	206	808
Coffee, tea, and spices	n.a.	n.a.	n.a.	36,450	33,711	43,108	n.a.	n.a.	n.a.	1,205	2,868	5,821
Vegetables and fruit	n.a.	n.a.	n.a.	25,431	29,718	29,826	n.a.	n.a.	n.a.	4,598	7,197	6,795
Sugar, sugar products and honey	n.a.	n.a.	n.a.	21,937	31,079	37,727	n.a.	n.a.	n.a.	306	1,092	1,106
Animal feeds	n.a.	n.a.	n.a.	9,901	11,030	12,212	n.a.	n.a.	n.a.	482	699	459
Tobacco and products	n.a.	n.a.	n.a.	29,577	35,993	39,981	n.a.	n.a.	n.a.	296	299	292
Oilseeds	n.a.	n.a.	n.a.	33,925	35,165	38,646	n.a.	n.a.	n.a.	1,562	2,410	2,286
Veg. fats and oils	n.a.	n.a.	n.a.	13,003	12,259	12,788	n.a.	n.a.	n.a.	29	79	2
Total agricultural products to EU	n.a.	n.a.	n.a.	217,102	268,175	306,546	n.a.	n.a.	n.a.	67,375	56,591	64,777
Total agricultural exports	n.a.	n.a.	n.a.	360,350	487,178	998'689	n.a.	n.a.	n.a.	197,449	226,744	400,044
Hungary												
Live animals	7,093	3,910	5,717	4,343	2,871	4,729	117,003	87,622	95,126	89,122	80,032	82,386
Meat and meat preparations	11,209	39,697	94,745	50,238	22,247	45,485	492,176	403,402	434,570	460,523	491,371	460,790
Dairy products and eggs	38,685	30,495	34,380	13,000	9,463	13,423	28,420	23,748	13,225	12,140	13,207	7,871
Grains and grain preparations	13,475	27,977	46,704	18,711	27,151	25,008	49,182	29,832	56,287	990'96	53,329	60,296
Coffee, tea, and spices	31,304	41,538	48,635	44,065	48,698	46,796	43,250	26,164	32,689	39,879	30,895	27,840
Vegetables and fruit	47,254	52,395	68,553	63,307	57,089	59,313	301,918	217,416	261,486	254,261	258,914	237,998
Sugar, sugar products and honey	3,106	27,939	10,075	11,636	11,375	9,208	19,242	19,301	16,720	24,315	28,267	16,538
Animal feeds	26,208	38,449	45,415	45,561	46,928	51,783	37,694	22,901	21,083	26,950	37,124	21,898
Tobacco and products	12,538	15,695	15,417	16,410	25,761	19,313	10,974	7,633	6,426	1,091	30,107	28,028
Oilseeds	2,469	5,848	10,231	15,771	4,450	4,619	46,168	74,793	86,653	84,302	94,837	56,704
Misc. edible products	53,313	59,164	74,059	44,830	33,846	39,445	25,165	16,873	13,923	8,223	6,423	4,964
Beverages	20,824	22,661	28,655	28,132	25,581	23,052	36,953	30,631	34,439	40,205	45,185	52,156
Hides, skins and furs	8,012	9,354	15,530	19,424	22,454	19,531	11,552	9,117	12,461	8,232	8,760	11,535
Crude plant and animal material	42,401	48,803	26,669	52,716	48,965	51,473	78,414	80,249	105,657	85,413	89,059	78,971
Total agricultural products to EU	n.a.	n.a.	n.a.	494,771	459,647	509,395	n.a.	n.a.	n.a.	1,219,717	1,230,126	1,130,340
Total agricultural exports	n.a.	n.a.	n.a.	1,007,051	998,440	1,150,361	n.a.	n.a.	n.a.	2,660,024	2.533,481	2,755,027

Table 4Agricultural trade between the EO and the OEE countries preparing to accessionContinued		ulles pieba	IIIII IOI acce	SSIOIICOII	nanim					4		
			dill	STIODILIS					Sliodxa	OILS		
	1992	1993	1994	1995	1996	1997	1992	1993	1994	1995	1996	1997
						Million U.S. dollars	S. dollars					
Poland												
Live animals	11,922	9,631	23,695	26,018	31,841	33,843	214,195	163,517	170,630	163,415	160,098	144,743
Meat and meat preparations	63,401	97,510	141,568	87,430	87,261	89,927	180,708	143,644	144,613	158,474	155,411	139,142
Dairy products and eggs	99,602	73,487	37,399	33,643	29,566	48,811	119,432	115,721	101,249	143,451	81,557	77,886
Grains and grain preparations	101,571	198,426	49,257	52,600	421,174	175,669	8,773	2,048	3,311	7,480	7,801	3,827
Coffee, tea, and spices	81,397	88,590	97,346	91,611	111,274	120,402	8,250	5,050	4,732	12,817	33,770	41,461
Vegetables and fruit	133,857	162,554	149,804	174,559	183,953	245,426	398,095	394,739	463,306	503,014	490,345	490,662
Sugar, sugar products and honey	64,605	42,315	42,460	118,764	74,832	56,726	29,294	29,069	34,031	38,522	62,253	59,589
Animal feeds	149,753	151,760	193,317	243,496	233,399	308,306	11,019	22,352	30,326	32,559	49,063	52,894
Tobacco and products	22,798	28,886	47,750	58,970	51,427	46,121	5,483	5,123	24,271	6,000	19,244	18,653
Oilseeds	10,698	5,983	4,490	4,060	73,178	29,786	21,521	3,101	1,547	67,790	14,436	948
Misc. edible products	91,596	116,232	146,356	166,194	146,700	149,838	12,820	10,307	12,052	10,281	9,476	7,722
Beverages	53,152	22,540	25,202	28,356	54,127	61,963	9,688	7,263	7,212	7,288	8,877	10,616
Hides, skins and furs	5,422	17,452	30,480	42,724	62,850	59,662	41,871	18,723	12,836	14,545	24,391	31,332
Crude Mineral fertilizers	48,909	46,306	49,923	64,384	72,193	74,874	76,659	64,744	76,804	87,911	82,542	63,594
Crude plant and animal material	87,056	83,673	94,486	128,064	143,260	132,827	58,418	57,822	60,537	76,508	83,043	95,785
Animal, veg. fats,oils,nes	16,610	21,757	33,706	58,982	66,967	69,385	9,681	10,930	9,964	13,525	13,817	11,209
Veg. fats and oils	57,071	53,015	66,588	60,356	54,185	65,140	3,600	36	0	200	808	109
Total agricultural products to EU	1,103,968	1,229,930	1,243,015	1,476,488	1,938,182	1,810,684	1,185,460	1,009,580	1,070,656	1,260,623	1,205,428	1,180,003
Total agricultural exports	1,995,641	2,284,693	2,525,034	3,210,921	4,193,959	3,956,581	1,869,810	1,547,155	1,903,072	2,307,380	2,561,513	3,100,035
Slovenia												
Live animals	1,935	2,327	4,911	8,473	3,366	2,177	11,050	2,884	1,444	1,359	1,722	1,376
Meat and meat preparations	18,476	30,310	53,219	36,060	21,339	24,442	39,369	33,627	24,500	19,286	17,076	19,777
Dairy products and eggs	7,892	14,626	16,043	18,976	17,217	14,432	9,752	5,957	8,087	6,799	6,384	5,713
Grains and grain preparations	27,650	32,904	51,488	32,686	51,829	48,900	983	1,373	1,331	897	1,033	1,039
Coffee, tea, and spices	10,154	24,366	29,177	38,150	39,239	36,591	2,436	3,410	2,701	1,338	1,944	2,415
Vegetables and fruit	28,592	54,039	72,595	97,943	95,004	91,696	42,381	28,296	34,508	27,313	20,577	16,862
Sugar, sugar products and honey	13,309	19,451	25,691	28,076	19,414	14,775	4,042	5,180	5,628	5,540	5,444	6,470
Animal feeds	10,773	15,481	16,702	19,978	16,669	16,141	3,848	4,292	4,844	5,548	5,912	6,781
Beverages	6,542	11,387	12,217	20,061	17,904	14,990	14,127	8,142	8,475	8,843	10,640	7,751
Hides, skins and furs	5,338	6,298	5,992	7,461	4,618	4,456	10,517	9,391	10,703	13,872	16,223	20,038
Crude Mineral fertilizers	25,039	22,453	26,775	32,641	33,816	30,416	2,133	1,657	1,342	1,491	1,678	1,031
Crude plant and animal material	13,867	22,496	27,052	36,574	37,995	34,996	4,925	3,526	3,453	2,627	1,815	1,644
Total agricultural products to EU	176,066	270,820	366,020	414,590	390,808	372,682	147,476	108,981	109,760	97,251	92,252	93,086
Total agricultural exports	598,836	598,589	703,703	832,714	824,619	788,580	428,346	298,113	341,530	342,345	365,864	348,473

n.a. = Not available.

Source: United Nations

Table 5--CEE and EU prices for principal commodities

Commodity	EU	Czech Rep.		Poland
Commodity	EU	Dollars	Hungary	Polariu
Wheat	113.47	119.33	72.28	130.19
Barley	113.47	104.29	63.88	110.81
Corn	113.47	104.29	65.28	95.50
Other coarse				
grains (rye)	113.47	104.29	65.28	95.50
Soybeans 1/				
Tariff (percent)	0.00	0.00	0.00	4.20
Index (number)	1.00	1.00	1.00	1.03
Rapeseed 1/	230.00	0.00		246.39
Tariff (percent)	0.00		0.00	39.00
Index (number)	1.00		1.00	1.28
Sunseed 1/	243.00	0.00	244.35	
Tariff (percent)	0.00			13.00
Index (number)	1.00			1.09
Soymeal 1/				
Tariff (percent)	4.50	0.00	5.00	8.30
Index (number)	1.05	1.00	1.04	1.06
Rapemeal 1/				141.00
Tariff (percent)	0.00	0.00	0.00	26.30
Index (number)	1.00	1.00	1.00	1.19
Sunmeal 1/				
Tariff (percent)	0.00	0.00	0.00	26.30
Index (number)	1.00	1.00	1.00	1.19
Cattle, beef and veal	1,560.71	1,051.81	984.38	689.00
Hogs, live weight	1,292.90	1,037.30	1,058.52	975.00
Poultry (ready to cook)	1,182.60	797.22	909.77	989.00
Eggs (retail)	1,256.30	1,017.76	1,208.67	1,731.40

1/ CEE prices for these commodities are not reported. Many of these commodities are not produced in the CEE countries and for all these commodities, the domestic price is assumed to be the world price plus whatever tariffs are in effect. In these cases the price wedge is the difference in tariff rates.

Souce: Economic Research Service, USDA.

The following general conclusions can be drawn from the model results:

- ** Enlargement actually relieves some of the pressures on the EU-18 grain sector. Total grain surpluses in the EU-18 are nearly the same as in the EU-15 under Agenda 2000. Wheat and barley surpluses are reduced, but there is a potential problem with expanding surpluses of other coarse grains—mainly rye.
- ** There are potential problems in the EU-18 with growing surpluses of pork and beef, which may make it difficult for the EU-18 to meet its WTO commitments on export subsidies.
- ** The EU-15 is not greatly affected by enlargement.
- ** U.S. exports are affected to a limited degree by enlargement. U.S. exports of corn and pork are slightly lower than in the Agenda 2000 scenario without enlargement. Exports of soymeal are slightly higher.

** Among the CEE countries, small changes occur simply because of Agenda 2000, in that Agenda 2000 brings about changes in world prices. However, far greater changes occur under enlargement. The changes are mainly in the livestock sectors. All three become much larger exporters of beef, pork and poultry. There are smaller changes in total net grain trade. As one might expect, Hungary's grain exports rise significantly, but these are mostly balanced by increased imports by Poland and the Czech Republic.

Grain. In the grain sector pressures from enlargement are not as great as suggested by earlier analysis. The only market that could experience problems is "other coarse grains," which is mainly rye. Stocks of other coarse grains in the EU-15 are projected to triple under Agenda 2000 without enlargement. With enlargement, the EU-18's net surplus of other coarse grains could rise another 29 percent.

Pressures in the rest of the grain sector are actually relieved somewhat because of enlargement. Net surpluses of wheat and barley of the EU-18 are 6 and 13 percent, respectively, below those projected for the EU-15 under Agenda 2000 without enlargement. The CEE countries switch from net exporters to large net importers of wheat. Net imports of barley decline, but the CEE countries remain net importers.

In the CEE countries, Agenda 2000 without enlargement brings declines in grain prices of 2 to 5 percent against the baseline in 2005. Under this scenario it is assumed that CEE price and border policies remain constant and world prices are fully transmitted to the domestic market. Under this scenario there are small declines in production and small increases in consumption, and the impact on net trade is marginal.

Enlargement, however, brings some dramatic changes in CEE grain prices, and the CEE response to those changes has important implications for the EU-18. The most significant changes can be summarized as follows:

Barley. Under the enlargement scenario, 2005/2006 barley prices are 11 percent higher in the Czech Republic and 65

Table 6--EU-18: Changes from EU-15 under Agenda 2000, 2005/2006

Commodity	Production	Consumption	Net surplus
		Percent	
Total grains	20.75	24.28	0.54
Coarse grains	27.29	26.24	57.24
Barley	14.45	17.13	-12.77
Corn	16.54	14.32	-9.75
Other	87.44	96.86	29.02
Wheat	14.74	22.28	-6.18
Oilseeds	12.16	7.01	1.74
Oilseed meal	5.84	11.36	21.33
Beef & veal	11.68	9.36	128.77
Pork	20.92	18.35	68.21
Poultry meat	1.12	1.13	1.08

Souce: Economic Research Service, USDA.

Table 7--Hungary, Poland and Czech Republic: Changes in production, consumption, and net surpluses of key products, 2005/2006

	Agend	la 2000 without enlar	gement		EU enlargement	
Commodity	Production	Consumption	Net surplus	Production	Consumption	Net surplus
			Percent chang	e from baseline		_
Coarse grains	-0.33	-0.30	0.28	3.48	-8.58	-242.21
Barley	-1.32	0.69	16.19	1.93	-2.61	-32.40
Corn	0.52	-1.89	-70.05	5.93	-29.04	-3,341.54
Other	-0.19	-0.18	0.36	3.21	-3.38	-352.73
Wheat	-1.79	1.89	-75.78	-9.01	6.18	-1,295.07
Oilseeds	-0.67	0.04	-16.19	-17.57	-1.57	-434.09
Oilseed meal	0.08	-0.49	-0.87	-1.46	19.06	32.86
Beef & veal	0.91	-0.74	20.29	-0.34	-13.09	122.89
Pork	0.35	0.44	-0.80	8.37	-1.90	130.77
Poultry	0.28	0.36	5.26	3.75	-1.89	-310.00

Souce: Economic Research Service, USDA

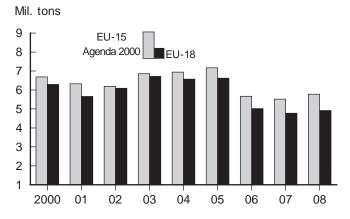
Table 8--CEE price changes, 2005/2006: Agenda 2000 and after enlargement

	Agend	da 2000 without enlar	gement		EU enlargement	
Commodity	Poland	Czech Rep.	Hungary	Poland	Czech Rep.	Hungary
			Per	cent		
Barley	-4.79	-4.19	-4.19	-7.58	10.94	64.52
Corn	-1.66	-1.66	-1.66	-5.95	12.21	62.83
Other coarse grains	-3.12	-2.16	-1.71	10.63	10.38	-6.22
Wheat	-5.00	-5.00	-5.07	-19.72	-1.52	42.56
Oilseeds	-2.49	-2.49	-2.49	-5.91	9.40	-4.12
Oilseed meal	-3.67	-3.67	-3.67	-10.26	17.26	-4.25
Beef & veal	2.37	2.37	2.37	106.50	48.34	43.95
Pork	-1.04	-1.04	-1.04	30.71	30.88	19.26
Poultry	-1.24	-1.24	-1.24	13.60	54.54	23.00

Souce: Economic Research Service, USDA.

percent higher in Hungary than in the baseline. Barley prices fall in Poland. The supply response is muted by the set-aside requirements. However, consumption declines 3 percent, and 2005/2006 net imports fall from 962,000 tons in the baseline scenario to 330,000 under enlargement. Net imports rise slightly from the baseline under Agenda 2000 without enlargement. The impact on the EU-18 is a decline in net surpluses of barley.

Figure 6 **EU Net Barley Surplus: Under Agenda** 2000 and After Enlargement



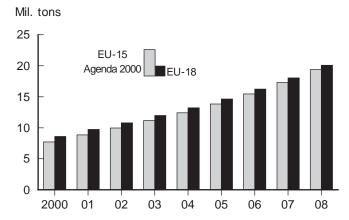
Source: Economic Research Service, USDA.

Other coarse grains. Rye makes up most of this category in the CEE countries. With enlargement prices increase 10-11 percent from the baseline in Poland and the Czech Republic but decline 6 percent in Hungary. The supply response is greater for rye than for barley because Poland is by far the largest producer, and most Polish producers qualify as small producers and are not subject to the set-aside requirement. As with the other grains, demand falls and the three countries switch from net importers of 274,000 tons in the baseline scenario to net exporters of 696,000 tons.

For the EU-18 the net surplus of other coarse grains rises 29 percent over that of the EU-15 under Agenda 2000. As pointed out in the Agenda 2000 analysis, EU-15 rye stocks are projected to triple by 2007. The additional CEE surpluses will further increase these stocks.

Wheat. According to our model results, accession of the three CEE countries will not create pressures for the EU-18 wheat market. Enlargement causes prices to rise 45 percent over the baseline in Hungary, while wheat prices fall in Poland and the Czech Republic. Output declines in all three countries. Hungarian producers switch to corn and barley, since prices for those commodities rise even more than the wheat price. Hungarian wheat exports rise despite the output decline, since domestic demand falls more than output. However, the rise in Hungarian exports is more than offset by increased imports by Poland and the Czech Republic. In

Figure 7
EU Coarse Grain Stocks: Under Agenda
2000 and After Enlargement



Source: Economic Research Service, USDA.

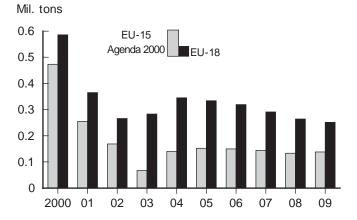
2005/2006 the three CEE countries switch from net exporters of 859,000 tons under the baseline to net importers of 1.7 million tons. The result for the EU-18 after enlargement is a 6-percent decline in the net surplus.

Oilseeds. Production, consumption, and net trade of oilseeds in the EU-18 after enlargement is nearly the same as in the EU-15 under Agenda 2000. The reason is that oilseed output declines in all three of the CEE countries. The principal oilseed produced in Poland and the Czech Republic is rapeseed; sunflowerseed is the dominant oilseed crop in Hungary. Polish rapeseed prices in the Agenda 2000 scenario are 4 percent lower in 2002 and 14 percent lower in 2008 than in the baseline scenario. Production is down 9 percent, and exports almost disappear. Under the enlargement scenario, area and production of sunflowers in Hungary are 24 percent lower than in the baseline scenario. This reflects the set-aside requirement and a shift from sunflowers to grains. In the Czech Republic, rapeseed prices are 13 percent higher in 2002 under enlargement than in the baseline scenario, but area still declines 11 percent. This apparent anomaly is most likely due to the set-aside requirement.

Imports of oilmeal by the EU-18 increase after enlargement. Total oilmeal consumption in the three CEE countries is 19 percent higher under the enlargement scenario than in the baseline (Agenda 2000 alone leads to a 1-percent decline in meal consumption.) Hungary accounts for the largest share of that increase, as livestock producers substitute meal for the more expensive grains. Imports of soymeal rise 4 percent in the Czech Republic and nearly 50 percent in Hungary. Soymeal imports by the EU-18 are 22 percent higher than in the EU-15 under Agenda 2000.

Beef, pork and poultry. Enlargement significantly affects EU-18 meat production and consumption. CEE producers see significant rises in beef and pork prices and expand output accordingly. At the same time CEE meat consumption

Figure 8
EU Net Pork Surplus: Under Agenda 2000
and After Enlargement



Source: Economic Research Service, USDA.

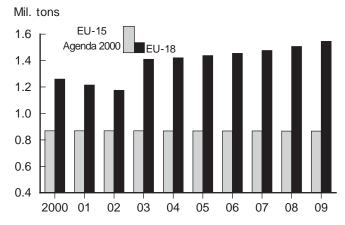
falls and surpluses rise. In 2006, net surpluses of beef, pork, and poultry in the EU-18 are 29, 66, and 7 percent higher, respectively, than those of the EU-15 in the Agenda 2000 scenario. The poultry surplus will most likely not present a problem. However, the EU-15 already has a problem with beef that will worsen under enlargement. Pork does not create much pressure for the EU-15 under Agenda 2000, but the additional pork surpluses under enlargement will most likely make it very difficult for the EU-18 to meet its export subsidy commitments.

The impacts of Agenda 2000 alone on the CEE countries are slight declines in pork and poultry prices (between 1 and 2 percent) and a 3- to 4-percent increase in the price of beef. But these changes are dwarfed by the large price increases for beef, pork, and poultry that could come with enlargement. In the enlargement scenario, pork output rises significantly from baseline levels in Poland and the Czech Republic. Hungary's pork output does not rise as much because the cost of feed rises significantly as well. Because CEE meat consumption falls, exports rise.

The largest price increases are for beef—58 percent in Hungary and 127 percent in Poland. But production increases are constrained by EU controls on the size of the dairy herd. Most CEE cattle are dual purpose dairy animals, and those numbers will not respond much to changes in domestic beef prices. In Poland, for example, only one quarter of beef production is price-responsive in 2002/03. The remainder is a function of the exogenous dairy herd sizes.

However, the price rise causes beef consumption to fall drastically, and beef exports rise. Hungary's exports, at 61,000 tons, are 50 percent higher under enlargement than in the baseline scenario. Poland's beef exports double to 112,000 tons. As a result, EU-18 beef exports are 29 percent above those of the EU-15 under Agenda 2000.

Figure 9
EU Net Beef Surplus: Under Agenda 2000
and After Enlargement



Source: Economic Research Service, USDA.

Pork prices rise 23 percent in Hungary, 34 percent in Poland, and 25 percent in the Czech Republic. Hungarian pork production falls due to the rise in feed costs, but Poland and the Czech Republic see pork output increase 10 and 9 percent, respectively. Pork exports rise 54 percent in Poland, while pork exports by the Czech Republic rise 10-fold to 124,000 tons in 2003, doubling to 253,000 in 2009. The impact for the EU-18 is a rise in net pork exports of 264,000 tons. EU-18 pork exports continue to rise throughout the projection period, reaching 1.6 million tons in 2009, against 1.1 million in the base scenario for the same year.

Hungary becomes a much larger exporter of poultry meat, as exports rise from 66,000 tons to 107,000. On the other hand, Poland becomes a larger net importer of poultry, with imports reaching 101,000 tons in 2003. Although poultry prices climb 20 percent, production in Poland rises less than 1 percent because of higher feed costs. On the other hand, consumption rises 3 percent as consumers substitute poultry for beef. The Czech Republic becomes an exporter of 23,000 tons. Poultry exports by the EU-18 reach 641,000 tons in 2003, 10 percent higher than under the base scenario.

Implications for U.S. Exports. For many commodities, EU enlargement has a very small effect on U.S. exports. Net U.S. grain exports, for example, are just half a percent lower in the enlargement scenario than in the Agenda 2000 scenario without enlargement. Soybean and poultry exports hardly change. One might expect beef exports to be affected as the CEE countries adopt the EU ban on imports of hormone-treated beef. But again, according to model results, U.S. beef exports do not change much, principally because the CEE countries constitute a very small share of the U.S. beef market.

There are some changes in exports of corn, soymeal, and pork. Through the entire projection period, U.S. corn exports are displaced by CEE corn and are nearly 2 per-

cent lower under the enlargement scenario than under Agenda 2000 without enlargement. Pork exports are hit harder, falling 6 to 7 percent. In contrast, soymeal exports are 3 percent higher in 2002 and 5 percent higher in 2008 under enlargement.

Other Considerations

Our analysis suggests that enlargement could lead to increased pressures for the EU in the markets for pork, beef, and other coarse grains. Under Agenda 2000, the EU-15 is expected to have problems in these markets even without enlargement, and the addition of the three CEE countries could exacerbate these problems. However, there are three issues, in addition to those considered in our analysis, that may qualify the results. One set of issues has to do with quality differences between CEE and EU products. A second concerns productivity increases that the Structural Funds could bring to the CEE countries. Finally, any analysis needs to consider the impact of changes in the markets for primary factors of production—land, labor, and capital—that will come with enlargement.

Quality issues. It is quite likely that the price differentials underlying the model results are not all policy induced. To some extent the differences are due to quality. Polish wheat, in particular, is generally regarded to be of rather poor quality. Much of it is not of milling quality but is feed wheat, which will not be eligible for intervention in the EU. The Polish wheat price has been kept high due to heavy intervention. But in a single market, the Poles would not be able to keep Hungarian wheat out of the country, and Polish millers might find it more profitable to buy Hungarian instead of domestic wheat. As a result, Poland's wheat output could decline even more than projected by the model.

Quality is a more serious issue for the livestock sectors of Poland and Hungary. Much of the current price differential between EU and CEE countries is due to lower quality and higher transactions costs in the marketing and distribution sector. There is considerable variation in quality, particularly in the hog sector. Hogs slaughtered at the top plants are generally of pretty high quality, often having a lean meat content of 58 percent or more. But the hogs slaughtered at the smaller plants tend to have a higher fat content. The leaner, higher quality carcasses generally command a higher price—both Poland and Hungary have a system of premia for high quality carcasses. However, the live hog prices that were used in the model were an average for all hogs. All hogs marketed in the enlarged EU will have to meet the higher standards. Raising the quality of the meat requires better feeding, which entails higher production costs. In addition, most CEE livestock producers do not now comply with EU regulations on animal welfare; compliance would increase production costs still further. For these reasons, the higher prices that come with accession may not generate the projected output increases.

CEE meat output will also be constrained by the very strict EU sanitary regulations governing meat processing. Slaughterhouses will have to install equipment for measuring back fat and apply the EUROP grading system to all carcasses. They will have to meet a formidable array of requirements that include flooring, equipment, and separation of the "clean" from the "dirty" stages of processing. Of the 700 plants in Hungary, just 24 currently apply those standards. Poland has 7,000 slaughterhouses, but only 20 are licensed for exports. Experts believe another 30 could be upgraded. But half of Poland's meat output and around 40 percent of Hungary's comes from small plants that do not meet EU standards. Many of these operate on the "gray economy," and most will have to close down on accession.

Impact of institutional reforms on CEE commodity mar**kets.** To a large extent the problems of high costs and low productivity that plague CEE producers stem from the institutional shortcomings discussed and analyzed above. Polish quality problems arise from the country's fragmented farm structure and low use of chemical inputs. The fragmented farm structure persists because of a poorly functioning land market and high unemployment in non-agricultural sectors. Subsistence agriculture continues to function as a social safety net, so farmers are reluctant to give up their land. High costs are attributable to inadequate transportation and communication systems and continuing bottlenecks in the marketing and distribution system. The investment needed to upgrade production and distribution has not been forthcoming because of high interest rates, the perceived riskiness of agriculture, and poorly functioning credit markets.

These shortcomings will have to be addressed before the EU will accept the CEE countries as new members. Many of the shortcomings are already being addressed through technical assistance and EU pre-accession funds. After accession the CEE countries can expect an even larger injection of cash from the Structural Funds and private investment. According to Agenda 2000, the EU has budgeted 3.1 billion Euros per year of pre-accession aid for the six applicants (the five CEE countries and Cyprus), of which 1.04 billion are for infrastructure development and 1.5 billion are for technical assistance under the PHARE Program. After accession, all five CEE's will be eligible for payments from the Structural Funds (the cutoff is 75 percent of average EU per capita national income). These will be targeted specifically at infrastructure improvement in the poorer regions of the countries.

To receive Structural Funds from the EU, the acceding countries will have to put forward specific proposals for funding and provide 50 percent of the funding. Poland has already come under fire for failing to draft good proposals for PHARE funding, and there are doubts as to whether Poland's officials will be able to make full use of potential assistance from the Structural Funds.

Changes in factor markets. Accession will also bring some significant changes in the markets for land, labor, and capital, which could significantly affect the structure of CEE agriculture. CEE agriculture is now highly labor intensive because wage rates are low, and capital and other inputs are relatively expensive. Wages could rise significantly after accession. If labor is fully mobile throughout the enlarged EU, there will be a tendency towards convergence of EU and CEE wages. Moreover, the Structural Funds and additional investment that will likely come with accession will generate more employment in the CEE countries, putting upward pressure on wages. Higher wages will draw much of the labor out of agriculture and should lead to consolidation of farms.

On the other hand, CEE exports of live cattle and horticultural products to the EU are possible mainly because of low labor costs.4 In addition, many experts, both from the EU and the CEE countries, have suggested that CEE farmers could specialize in organic production, but this too is economically feasible only because of low labor costs. If CEE wages rise significantly after accession, the economic rationale for such specialization could dissipate.

Land prices will also increase. Some CEE officials have expressed the desire to retain some restrictions on land purchases by citizens from other EU countries during a transition period, but eventually, all EU citizens will have to have the right to purchase CEE land. Higher land prices would affect the production of all field crops, leading to more inputintensive production. According to the model results, CEE grain yields remain substantially lower than EU yields after accession, reflecting a continuation of current land-extensive production practices. With higher land prices, these practices will no longer be economically rational. In the livestock sector, cattle would be more affected than hogs or poultry, because they depend more on pasture for their feed.

The impacts of the Structural Funds and changes in relative prices of primary factors of production have not been analyzed in the modeling work done to date at ERS. This remains a subject for further research.

Conclusion

Overall, it appears that pressures on the CAP from the impending enlargement are not as serious as previous analysis indicated. Our analysis suggests that enlargement will bring increased surpluses of other coarse grains, pork, and poultry, but will relieve pressures in other markets.

The pressures on EU-18 markets may be even less than our analysis indicates. Results are misleading to the extent that

 $^{^4\,\}mathrm{A}$ Polish cattle breeder explained that he raises cattle up to 200 kilograms and then exports them to Italy. According to him, the early stages of cattle rearing require a great deal of personal attention, while the latter stages are less labor intensive. Caring for young cattle is not economical in Italy because of high labor costs, so the Italians prefer to import young cattle from Poland and other CEE countries.

price differentials reflect quality differences. The model also does not measure the impact of the Structural Funds and changes in price of primary factors. A more accurate assessment of possible output increases will require an analysis of the changes in cost structure that will come with accession. Part of the changes in cost structure will come from the new quality standards that will be imposed. Another portion of the change will come from the changes in relative prices of land, labor and capital.

Another caveat is the timetable for accession. For many reasons, most experts agree that accession is impossible until 2006 at the earliest. The CEE's have a long way to go before they meet all the institutional requirements for accession. In addition, there is growing opposition among producers to accession, particularly in Poland. Polish producers are highly suspicious of the CAP and are resisting the changes they will need to make. Czech and Hungarian producers view high support prices as the answer to all their problems. But there is a large degree of ignorance among producers in all the CEE countries about the full implications of accession. In interviews conducted by ERS researchers, Hungarian livestock producers appeared confused by EU animal welfare regulations. Polish dairy producers expressed considerable confusion about EU dairy quotas. A small poultry processor in Poland had heard that the EU will require strict labeling of carcasses, but has no idea how such labeling is to be done. A more comprehensive effort to educate CEE producers on the true costs and benefits of the CAP would better prepare them to continue producing and to thrive in a single market.

References

European Commission, Agenda 2000: Commission Opinion on Poland's Application for Membership in the European Union, 1997(?).

European Commission, Agenda 2000: Commission Opinion on Hungary's Application for Membership in the European Union, 1997(?).

European Commission, Agricultural Situation and Prospects in Central and Eastern European Countries: Summary Report, June 1998.

European Commission, Agricultural Situation and Prospects in Central and Eastern European Countries: Poland, June 1998.

European Commission, Agricultural Situation and Prospects in Central and Eastern European Countries: Hungary, June 1998.

Debatisse, Michel L., *Poland: Agriculture in Transition*, The World Bank, Europe and Central Asia Regional Office, April 1997

Debatisse, Michel L., *Hungary, A Successful Agriculture* and Food Economy in Constant Search for Higher Competitiveness, The World Bank, Europe and Central Asia Regional Office, October 1998.

Leetmaa, Susan, Elizabeth Jones and Ralph Seeley, "Enlargement of the European Union to Central and Eastern Europe: Obstacles and Possible Consequences of Policy Harmonization," *Regional Trade Agreements and U.S. Agriculture*, Economic Research Service, U.S. Dept. Ag., Agriculture Economic Report Number 771.

Nagy, Maria Orban, Marta Stauder, and Marton Szabo, "The Livestock Sector in Hungary: Review of Livestock/Feed Relationships and Implications for Food Security," Research and Information Institute for Agricultural Economics, Budapest 1998.

Szabo, Marton, "Food Industries in Transition Economies: Current State and Options for Improvement", Research and Information Institute for Agricultural Economics, Budapest 1998.